



First Capital Index, 2023

Business Activity Index for Rochester, NY and Monroe County



Produced and Published for the Greater Good by First Capital Business Solutions

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Overview

The First Capital Index[®] is a collection of indexes that use credit card processing data (sales), specifically monthly dollar amounts (volume) from a wide range of businesses, to measure economic trends in spending over time. The collection divides into three Business Category indexes relying on Merchant Category Codes (MCC)¹ data, and four geographic indexes using zip code data within Monroe County². The purpose of the index is to inform business and public policy of these trends.

Each index does not indicate or suggest a total dollar amount of credit card sales for Monroe County. Instead, it uses an index value of 1.00 as its starting point and measures changes in credit card processing data from month to month to indicate growth or contraction, causing the index value to go up or down over time.

Our method of calculating each index value for each month begins with selecting from a group of businesses to be included in the calculation based on their category, region, and sales history. For a given month, we compare each business's credit card sales (volume) with the previous month, we then weight the volume based on the number of transactions for that business, and arrive at an index value based on how much all the businesses in the category or region grew or shrank in weighted volume.

The First Capital Index[®] Has several strengths and weaknesses based on its design and data set. One strength of the index is the use of empirical point-of-sale data over a period of time (as opposed to subjective or survey data). Another is the focus on changes of credit card spending over time, a measure that most concerns other business owners. One weakness is the self-selecting nature of the businesses in the index; all are clients of First Capital Business Solutions, and this will leave out credit card spending at large national retailers.

First Capital Index Case Study, 2022 – 2023

The First Capital Index results show several types of data. First is the **Index Value**, which shows the growth or decline in credit card sales from the preceding month. For example, a value of 1.06 for March represents an increase of 6% compared to February. These results are presented as **bar graphs** in the Results section later in this publication.

The **Cumulative Index** shows the growth or decline since the beginning of the Index. For example, a Cumulative Index of 102% in August shows growth of 2% compared to December of the previous year. These results necessarily start at a baseline of 1.0 for the given period, and are presented as **line graphs** in the Results section.

Based on the results of the First Capital Index[®], these data suggest the following noteworthy findings:

¹ The Merchant Category Codes that make up each Category Index can be seen in the Appendix

² The zip codes that make up each geographic region and map can be seen in the Appendix

First Capital Index Findings

Business activity in the Rochester region experienced an upward shift in the first half of 2023 relative to the second half of 2022 across different business categories, with service businesses lagging that trend. This trend also held true across different geographic regions, with the southern portion of the Rochester area lagging that trend.

Retail business activity showed a predictable spike during the holiday period, but taking that into account **Services** showed more variation in activity throughout the period, with **Eating Places** remaining relatively more consistent, with the three major categories all experiencing and recovering from a post-holiday slump.

When examining the index performance month-to-month, (shown using bar graphs) the regional graph shows more consistency between the studied regions versus the business category graph, where there is more variation in month-to-month performance between the different business categories.

First Capital Index Business Categories and Geographic Regions

The First Capital Index[®] is divided into the following business categories:

- **Retail Business Category Index** – Retail businesses which are operationally defined as places of business in which merchandise is sold primarily to ultimate consumers;
- **Eating Places Business Category Index** – This index will be places where people pay to sit and eat meals that are cooked and served on the premises; and
- **Service Business Category Index** – This index will be businesses that perform work, but do not produce a tangible commodity.

Available Data

First Capital Business Solutions has credit card sales records for over 120 *Merchant Category Codes* (“MCC”), and the number of businesses who are clients of First Capital Business Solutions is increasing. With access to the data from these businesses, First Capital Business Solutions is able to conduct analytics on over \$375 million and over 13 million transactions in annual business activity in the Retail, Restaurant, and Service industries. These data are from both debit and credit card point of sale transactions, and do not include cash transactions.

The clients of First Capital Business Solutions are located in the Rochester, New York metropolitan area; throughout the mid-Atlantic region; and, in the Tampa Bay, Florida metropolitan area.

Method

The First Capital Index[®] is a measure business activity growth and decline by business type and geographic region. This index shows the percentage change in the average credit card sales volume weighted by tickets from the current month to the previous month, represented by the index value. The greatest value of the First Capital Index[®] is as a tool to examine trends in business activity over time.

The eight indexes comprising the First Capital Index[®] have been created by selecting individual businesses in each MCC and geographic region. The businesses were selected based on:

- **MCC** – Including as many business types as possible;
- **Location** – Targeting every zip code within Monroe county, categorized into an appropriate geographic region; and,
- **Processing Timeframe** – Limiting inclusion for a given month so long as each business for a given month processed the month after the current month and before the previous month (a check of four months total). This ensures the two months compared for each business were full months and not months that the business opened or closed their account.

Point-of-sale data for each business, including MCC code and zip code, is matched with monthly credit card sales data. Each month, businesses are selected to be part of the calculation group that determines the index value based on whether they meet the Processing Timeframe criteria outlined above, and the MCC and Location criteria for the relevant sub-indexes. By selecting businesses that meet these criteria, the index eliminates business that have either just started or just ended processing credit card sales (a very large threat to validity because a business just starting in month 1 would create the erroneous impression of large growth in month 2, and vice versa for a business that ended in month 2). This selection process would result in the number of businesses included in the index during a given month to be between 409 and 431.

The downside of controlling for this threat to validity is that there is a one-month lag for new businesses before their credit card sales data begins to be reflected in the index. However, the First Capital Index[®] is best used as a longitudinal measure of economic development, rather than a snapshot in time; this lag was worth the potential downside.

The algorithm for the index is as follows:

$$1.00 - [(Month Y - Month X) / Month X]$$

Power and Threats to Validity

The United States Department of Commerce releases a similar index called the Advance Monthly Sales for Food and Retail, which is a measure of consumer's personal consumption across retail industries and tracks growth or deceleration of personal consumption spending, which makes up two-thirds of the annual United States economy. The Association for Investment Management and Research Journal lists the *Advance Monthly Sales for Food and Retail Index* among the Top 10 vital economic indicators.

The *Advance Monthly Sales for Food and Retail index* released monthly by the United States Department of Commerce is a:

...stratified random sampling method is used to select 4,700 retail and food services firms whose sales are then weighted and benchmarked to represent the complete universe of over three million retail and food services firms.³

³ U.S. Census Bureau, "Advance Monthly Sales for Retail and Food Services, December 2017", Release Number: CB18-05, https://www.census.gov/retail/marts/www/marts_current.pdf.

The United States Department of Commerce also recently partnered with MetLife to produce the *Small Business Index: The Voices of Small Business Owners*. This quarterly report is a summary of a survey of 1,000 small business owners. There are 10 questions in the survey. Rochester is not a target city in this survey.

The First Capital Index[®] is not a randomized sample because the companies in the index are First Capital Business Solutions clients, and this is arguably a threat to validity. However, the clients chosen are a random sampling among current First Capital Business Solutions clients. In addition, the First Capital Index[®] is a powerful indicator of Rochester's economic vitality.

- The population of First Capital Business Solutions customers is a robust sample among companies in Monroe County, and the intention is for this number to grow (while rescaling the index to maintain reliability).
- The First Capital Index[®] is more than retail and food service, and thus **represents more than two thirds of the local economy**.
- The First Capital Index[®] provides geographic and industry-specific indicators of economic trends of First Capital Business Solutions customers.
- The First Capital Index[®] is more robust than a 10-question survey of small-business owners. The index is supported with longitudinal empirical point-of-sale data from businesses in the greater Rochester metropolitan area.

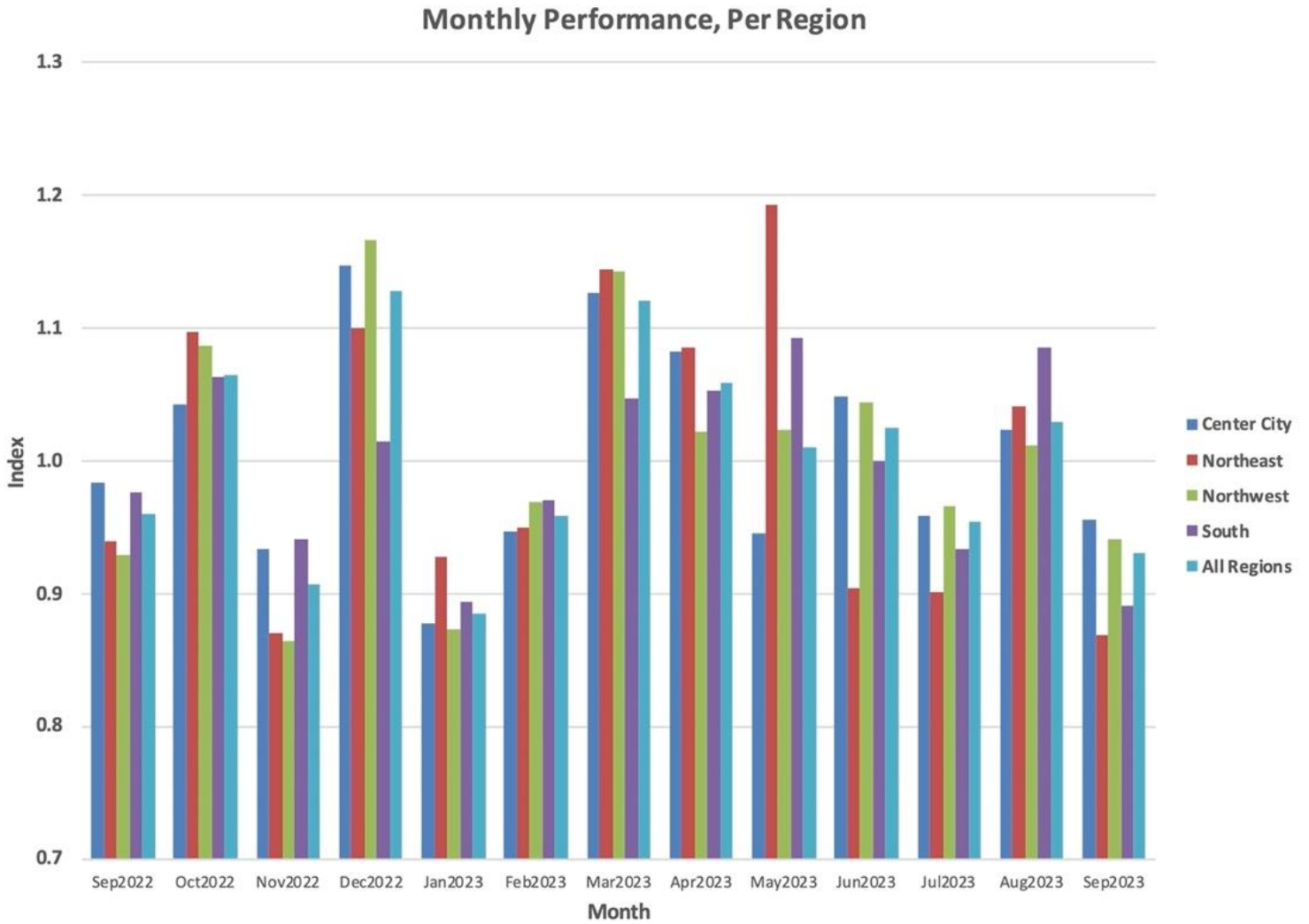
First Capital Business Solutions

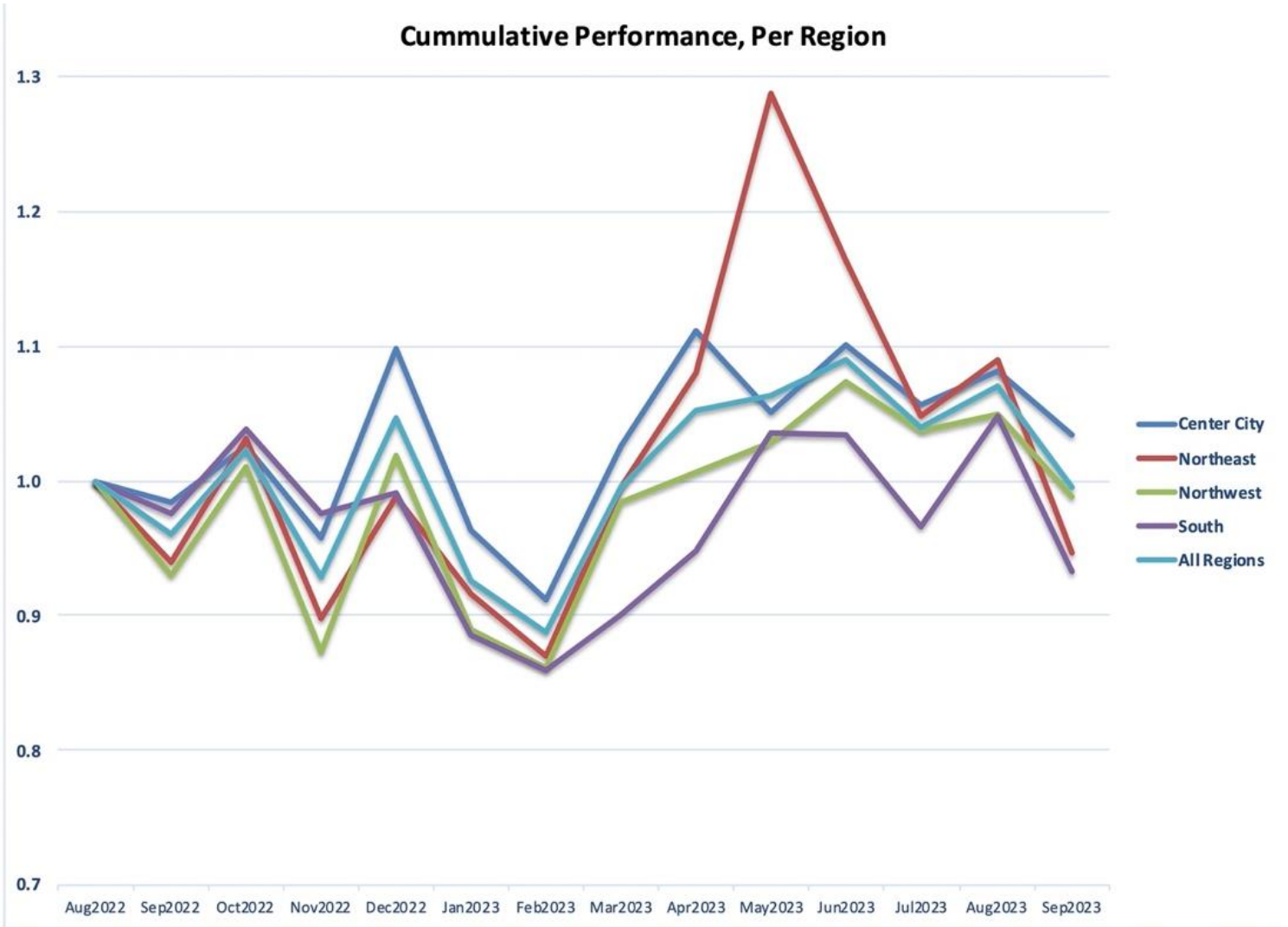
First Capital Business Solutions is a credit card processor in Rochester, New York specializing in comprehensive payment processing solutions for businesses accepting credit cards, including point-of-sale payment processing. First Capital Business Solutions has unique access to point-of-sale trend data that can provide data about economic activity in the greater Rochester metropolitan area.

These data can be analyzed in myriad ways to provide business owners, policy makers, and other key stakeholders with valid and reliable information about business activity trends in neighborhoods across the metropolitan area. This analysis can be used as one source of information to make business and policy decisions from a data-driven context.

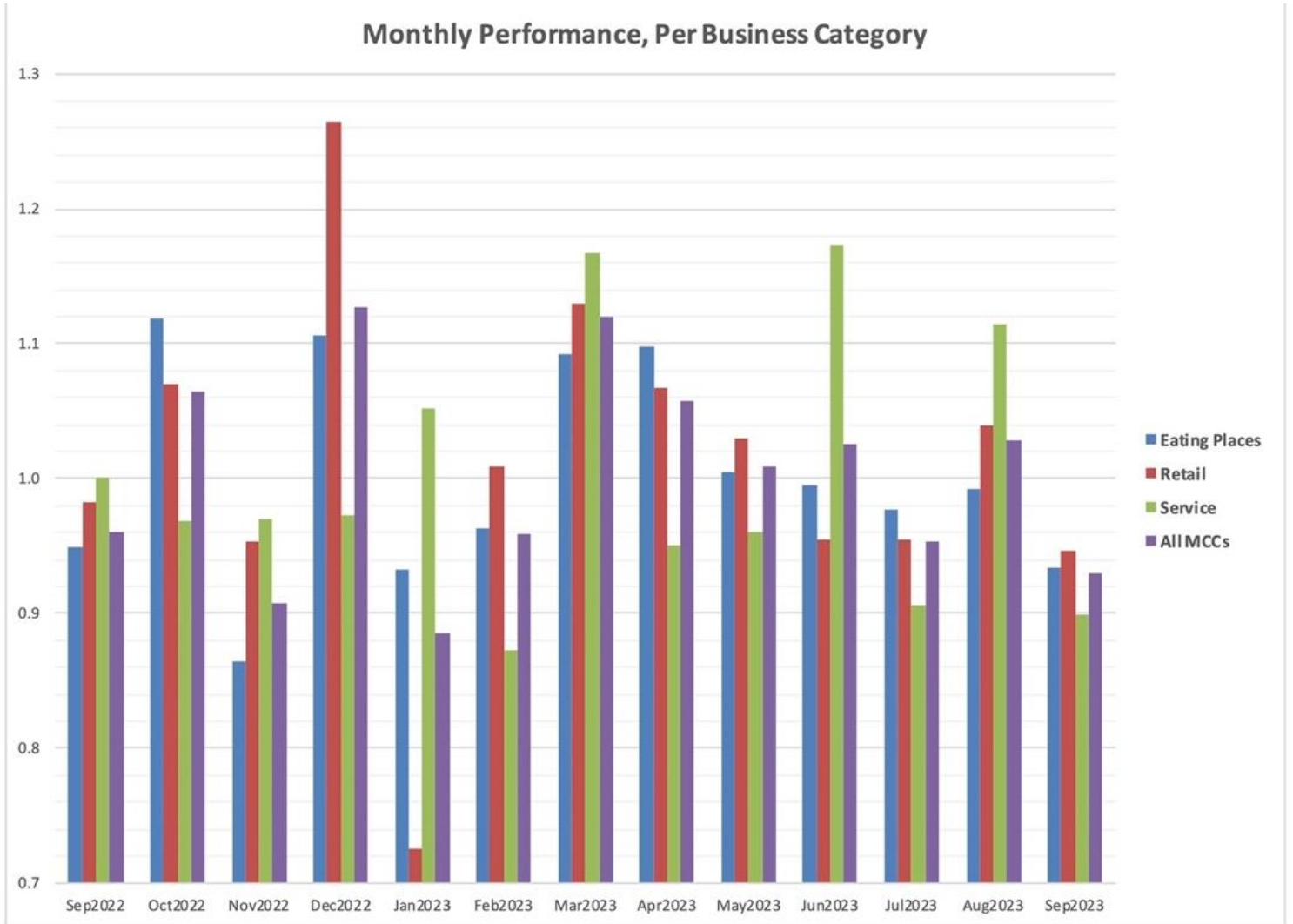
First Capital Business Solutions has access to vital data analytics at the individual transaction level, such as customer age, zip code, gender, etc... but this data is only accessible to individual merchants. This level of data is available on our credit card processing platform as an extra service.

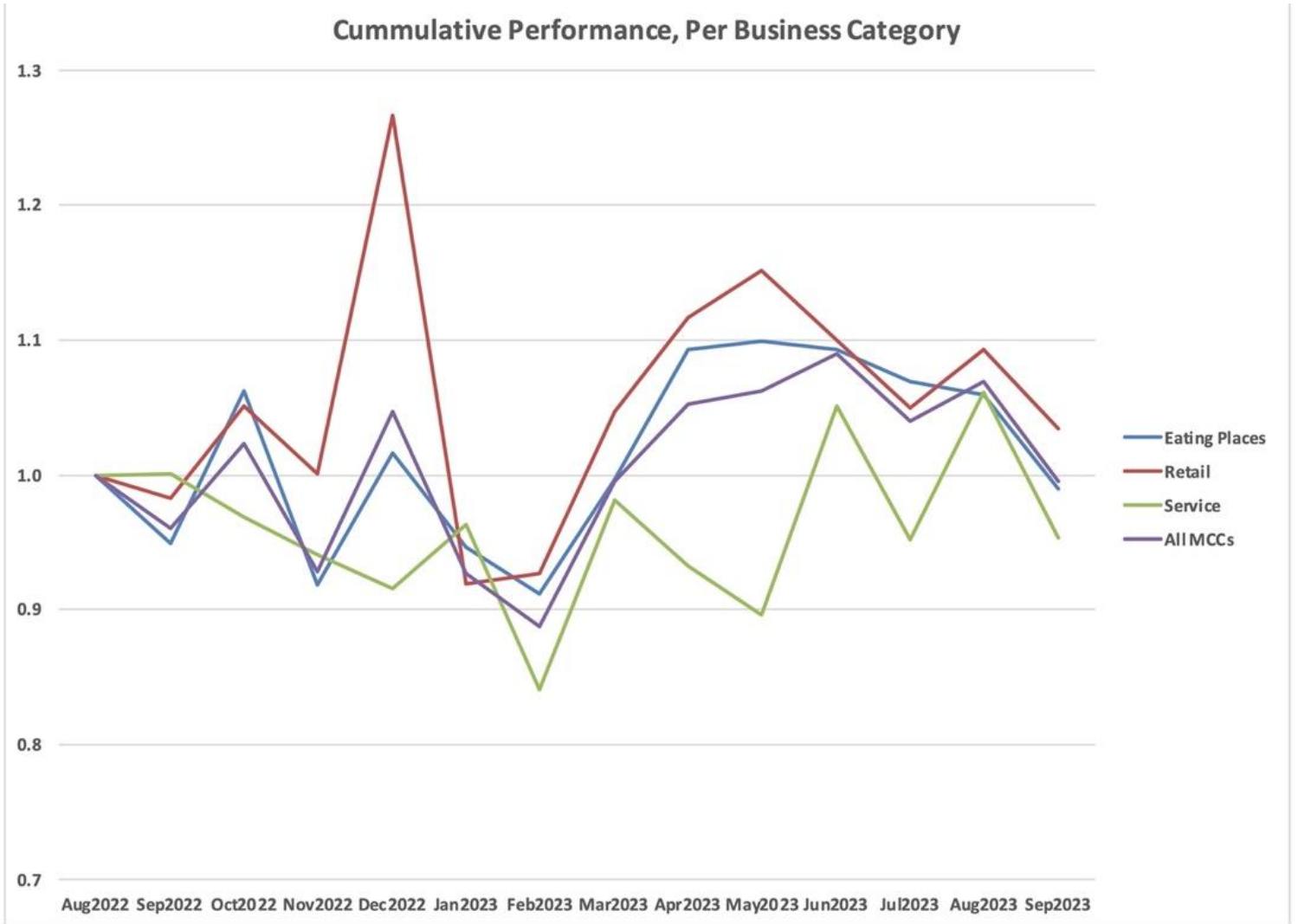
First Capital Index, Geographic Region Results





First Capital Index, Business Category Results





Appendix

Geographic Region Categories: Classification of Zip Codes

- **Center City Business District:** 14604, 14605, 14607, 14608, 14609, 14611, 14613, 14614, 14619, 14620, 14621
- **Northeast:** 14445, 14526, 14580, 14617, 14618, 14622, 14625
- **Northwest:** 14420, 14464, 14468, 14514, 14559, 14606, 14612, 14615, 14616, 14624, 14626
- **South:** 14428, 14450, 14467, 14472, 14506, 14511, 14534, 14543, 14546, 14586, 14623

Business Categories: Classification of MCC Codes

Retail Businesses

4457 - Boat Rentals and Leases	5611 - Men's and Boy's Clothing and Accessories Stores
4468 - Marinas, Marine Service, and Supplies	5621 - Women's Ready-to-Wear Stores
5013 - Motor vehicle supplies and new parts	5651 - Family Clothing Stores
5045 - Computers, Computer Equipment, Software	5655 - Sports Apparel, Riding Apparel Stores
5072 - Hardware Equipment and Supplies	5691 - Men's and Women's Clothing Stores
5094 - Precious Stones and Metals, Watches and Jewelry	5697 - Tailors, Seamstress, Mending, and Alterations
5099 - Durable Goods, Not Elsewhere Classified	5712 - Home Furnishings (Except Appliances)
5131 - Piece Goods, Notions, and Other Dry Goods	5713 - Floor Covering Stores
5193 - Florists' Supplies, Nursery Stock and Flowers	5718 - Fireplace, Fireplace Screens, and Accessories Stores
5198 - Paints, Varnishes, and Supplies	5722 - Household Appliance Stores
5231 - Glass, Paint, and Wallpaper Stores	5732 - Electronic Sales
5251 - Hardware Stores	5733 - Music Stores, Instruments, Sheet Music
5261 - Nurseries – Lawn and Garden Supply Store	5734 - Computer Software Stores
5310 - Discount Stores	5912 - Drug Stores and Pharmacies
5331 - Variety Stores	5921 - Package Stores – Beer, Wine, and Liquor
5399 - Misc. General Merchandise	5931 - Used Merchandise and Secondhand Stores
5411 - Grocery Stores, Supermarkets	5932 - Antique Shops
5422 - Meat Provisioners – Freezer and Locker	5940 - Bicycle Shops – Sales and Service
5441 - Candy, Nut, and Confectionery Stores	5941 - Sporting Goods Stores
5462 - Bakeries	5942 - Book Stores
5499 - Misc. Food Stores, Specialty Markets, etc...	5943 - Stationery Stores, Office and School Supplies
5511 - Auto Dealers (New and Used) Sales, Service, etc...	5944 - Watch, Clock, Jewelry, and Silverware Stores
5521 - Auto Dealers (Used Only)	5945 - Hobby, Toy, and Game Shops
5532 - Automotive Tire Stores	5947 - Card Shops, Gift, Novelty, and Souvenir Shops
5533 - Automotive Parts, Accessories Stores	5949 - Sewing, Needle, Fabric, and Price Goods Stores
5542 - Automated Fuel Dispensers	5970 - Artist's Supply and Craft Shops
5561 - Recreational and Utility Trailers, Camp Dealers	5971 - Art Dealers and Galleries
5571 - Motorcycle Dealers	5972 - Stamp and Coin Stores
5599 - Miscellaneous Auto Dealers	5975 - Hearing Aids – Sales, Service, and Supply Stores
	5992 - Florists

5993 - Cigar Stores and Stands
5995 - Pet Shops, Pet Foods, and Supplies Stores
5996 - Swimming Pools – Sales, Service, and Supplies
5999 - Miscellaneous and Specialty Retail Stores
7641 - Furniture, Furniture Repair, and Refinishing

Travel & Entertainment

7011 - Lodging – Hotels, Motels, Resorts, etc...
7032 - Sporting and Recreational Camps
7033 - Trailer Parks and Camp Grounds
7297 - Massage Parlors
7922 - Theatrical Producers (Except Motion Pictures)
7929 - Bands, Orchestras, and Misc Entertainers
7941 - Commercial Sports, Athletic Fields, etc...
7991 - Tourist Attractions and Exhibits
7992 - Golf Courses – Public
7994 - Video Game Arcades/Establishments
7996 - Amusement Parks, Carnivals, Circuses, etc...
7997 - Clubs: Recreation, Athletic, Country, etc...
7999 - Recreation Services (Not Elsewhere Classified)

Eating Places

5812 - Eating places and Restaurants
5814 - Fast Food Restaurants

Service Businesses

1520 - General Contractors-Residential and Commercial
1711 - Air Conditioning Contractors, Full Service
1750 - Carpentry Contractors
1771 - Contractors – Concrete Work
1799 - Contractors – Not Elsewhere Classified
4121 - Taxicabs and Limousines
4215 - Courier Services – Air or Ground, Freight forwarders
4225 - Public warehousing, Storage
4789 - Transportation Services, not elsewhere classified
4899 - Cable and other pay television
5541 - Service Stations (with or without ancillary services)
5811 - Caterers
5935 - Wrecking and Salvage Yards
6300 - Insurance Sales, Underwriting, and Premiums
6513 - Real Estate Agents and Managers - Rentals
7210 - Laundry, Cleaning, and Garment Services

7216 - Dry Cleaners
7221 - Photographic Studios
7230 - Barber and Beauty Shops
7251 - Repair Shops, Shoe Shine Parlors, Hat Cleaning Shops
7261 - Funeral Service and Crematories
7276 - Tax Preparation Service
7277 - Counseling Service – Debt, Marriage, Personal
7296 - Clothing Rental – Costumes, Formal Wear, Uniforms
7298 - Health and Beauty Shops
7299 - Misc. Personal Services (not elsewhere classifies)
7311 - Advertising Services
7379 - Computer Maintenance/Repair
7523 - Automobile Parking Lots and Garages
7531 - Automotive Body Repair Shops
7534 - Tire Re-treading and Repair Shops
7538 - Automotive Service Shops
7542 - Car Washes
7549 - Towing Services
7622 - Radio Repair Shops
7631 - Watch, Clock, and Jewelry Repair
7692 - Welding Repair
7699 - Repair Shops and Related Services –Misc
7829 - Motion Pictures and Production/Distribution
7832 - Motion Picture Theaters
8011 - Doctors and Physicians (Not Elsewhere Classified)
8021 - Dentists and Orthodontists
8041 - Chiropractors
8042 - Optometrists and Ophthalmologists
8043 - Opticians, Opticians Goods and Eyeglasses
8049 - Podiatrists and Chiropodists
8062 - Hospitals
8099 - Medical Services and Health Practitioners
8111 - Legal Services and Attorneys
8299 - Schools and Educational Services
8398 - Charitable and Social Service Organizations
8911 - Architectural – Engineering and Surveying Services
8931 - Accounting, Auditing, and Bookkeeping Services
8999 - Professional Services (not elsewhere defined)